## **CLAIMS:**

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- 1. A phosphate derivative of a phenolic hydroxy compound comprising the reaction product of the following steps:
  - (a) reacting the phenolic hydroxy compound with an alkyl α:ω dialdehyde or a sugar-like polyhydroxy dialdehyde to form a hemiacetal;
  - (b) reducing the terminal aldehyde group on the product from step (a) to a hydroxyl group; and
  - (c) phosphorylating the hydroxyl group formed in step (b) to produce a phosphate derivative of the phenolic hydroxy compound.
- The phosphate derivative of a phenolic hydroxy compound according to claim 1 having the structure of Compound (I) wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> may each independently be chosen from H or an alkyl group and n and m are independently in the range of 0 to 8.
- The phosphate derivative of a phenolic hydroxy compound according to claim 1 having the structure of Compound (II) wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> may each independently be chosen from H or an alkyl group and R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> can each independently be H or OH
  - 4. The phosphate derivative of a phenolic hydroxy compound according to claim 1 wherein the product of step (c) has been reacted with a complexing agent selected from the group comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids.
  - 5. The phosphate derivative of a phenolic hydroxy compound according to claim 1 wherein the phenolic hydroxy compound is propofol or a derivative of propofol.
- 6. The phosphate derivative of a phenolic hydroxy compound according to claim 5
  wherein the phosphate derivative of propofol has been reacted with a complexing agent selected from the group comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids.
  - 7. The phosphate derivative of a phenolic hydroxy compound according to claim 6 wherein the complexing agent is arginine.

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- 8. The phosphate derivative of a phenolic hydroxy compound according to claim 6 wherein the complexing agent is disodium lauryl-imino-dipropionate.
- 9. The phosphate derivative of a phenolic hydroxy compound according to claim 1 wherein the alkyl α:ω dialdehyde or a sugar-like polyhydroxy dialdehyde is selected from the group consisting of gluteraldehyde, trihydroxy pentandial, glyoxyal and mixtures thereof.
- 10. The phosphate derivative of a phenolic hydroxy compound of claim 1 wherein the phenolic hydroxy compound is selected from adrenaline, analgesics and mixtures thereof.
- 10 11. A method for preparing a phosphate derivative of a phenolic hydroxy compound comprising the steps of:
  - reacting the phenolic hydroxy compound with an alkyl α:ω dialdehyde or a sugar-like polyhydroxy dialdehyde to form a hemiacetal;
  - (b) reducing the terminal aldehyde group on the product from step (a) to a hydroxyl group; and
  - (c) phosphorylating the hydroxyl group formed in step (b) to produce a phosphate derivative of the phenolic hydroxy compound.
  - 12. The method according to claim 11 further comprising step (d) reacting the product of step (c) with a complexing agent selected from the group comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids.
    - 13. The method according to claim 11 wherein the phenolic hydroxy compound is propofol or a derivative of propofol.
- 14. The method according to claim 13 comprising the further step of reacting the
  25 phosphate derivative of propofol with a complexing agent selected from the group
  comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen
  functional groups and proteins rich in these amino acids.
  - 15. The method according to claim 14 wherein the complexing agent is arginine.
- 16. The method according to claim 14 wherein the complexing agent is disodium laurylimino-dipropionate.

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- 17. The method according to claim 11 wherein the alkyl α:ω dialdehyde or a sugar-like polyhydroxy dialdehyde is selected from the group consisting of gluteraldehyde, trihydroxy pentandial, glyoxyal and mixtures thereof.
- 18. A phosphate derivative of propofol or a derivative of propofol comprising the reaction product of the following steps:
  - reacting propofol or a derivative of propofol with an alkyl α:ω dialdehyde or a sugar-like polyhydroxy dialdehyde to form a hemiacetal;
  - (b) reducing the terminal aldehyde group on the product from step (a) to a hydroxyl group; and
- 10 (c) phosphorylating the hydroxyl group formed in step (b) to produce a phosphate derivative of propofol or a derivative of propofol.
  - 19. The phosphate derivative of propofol or a derivative of propofol according to claim 18 wherein the phosphate derivative from step (c) has been reacted with a complexing agent selected from the group comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids.
  - 20. The phosphate derivative of propofol or a derivative of propofol according to claim 19 wherein the complexing agent is arginine.
  - 21. The phosphate derivative of propofol or a derivative of propofol according to claim 19 wherein the complexing agent is disodium lauryl-imino-dipropionate.
- 22. The phosphate derivative of propofol or a derivative of propofol according to claim 18 wherein the alkyl α:ω dialdehyde or a sugar-like polyhydroxy dialdehyde is selected from the group consisting of gluteraldehyde, trihydroxy pentandial, glyoxyal and mixtures thereof.
- A phosphate derivative of a phenolic hydroxy compound according to any one of claims 1 to 8 when used as a prodrug.
  - 24. A phosphate derivative of a phenolic hydroxy compound according to any one of claims 1 to 8 when used as an anaesthetic.

- 25. A method for improving the bioavailability of a phenolic hydroxy compound comprising the following steps:
  - reacting the phenolic hydroxy compound with an alkyl α:ω dialdehyde or a sugar-like polyhydroxy dialdehyde to form a hemiacetal;
- 5 (b) reducing the terminal aldehyde group on the product from step (a) to a hydroxyl group; and
  - (c) phosphorylating the hydroxyl group formed in step (b) to produce a phosphate derivative of the phenolic hydroxy compound.